TECHNICAL REVIEW GUIDES FOR WATER SUPPLY PLANNING, RESERVOIR STORAGE REALLOCATION STUDIES, AND WATER SUPPLY STORAGE CONTRACTS AND AGREEMENTS

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Technical Review Guides

Water Supply Planning Studies

References:
ER 1105-2-100, 22 Apr 2000 (http://www.usace.army.mil/inet/usace-docs/eng-regs/er1105-2-100/toc.htm) – para. 3-8, 3-9; Appendix E, para. E-52 *et seq*.
EP 1165-2-1, 30 July 1999 (http://www.usace.army.mil/publications/eng-pamphlets/ep1165-2-1/entire.pdf) – para. 18-2
Water Supply Handbook, Revised IWR Report 96-PS-4, Dec 1998 (http://www.iwr.usace.army.mil/iwr/pdf/96ps4.pdf) – Chap. 6, 8

1. General Topics

1.1. Study Authority

1.1.1. What is the authority and purpose of this water supply study?

1.1.2. Does the study conform to the intent of the cited study authority?

1.2. Policy Aspects

1.2.1. Does the proposed project conform to policies established by law and USACE regulations governing Federal participation?

1.2.2. Does the proposed project conform to current Administration policies and decisions, as well as directions, actions, and interpretations by OMB and ASA(CW)?

1.3. Scope of the Evaluation

1.3.1. Are all the water resource related problems fully and clearly evaluated?

1.3.2. Are all the significant resources adequately considered?

1.3.3. Are all foreseeable short- and long-term needs adequately considered? How is the water usage expected to grow over the projection period?

1.3.4. Are implications outside the defined study area properly addressed?

1.3.5. Who is requesting the Municipal and Industrial (M&I) water supply?

1.3.6. What is the amount of the water supply storage requested?

1.4. Objectives of the Study

1.4.1. Are planning objectives clearly stated?

1.5. Risk and Uncertainty/Sensitivity Analysis

1.5.1. Is risk analysis adequately scoped in the initial stage of the study?

1.5.2. Are the alternative plans and their effects sufficiently examined to determine the uncertainty inherent in the data or in the various assumptions of future economic, demographic, social, attitudinal, environmental, hydrologic, and technological trends?

1.5.3. Are the areas of sensitivity adequately identified and proper analysis and testing performed so that decisions can be made with knowledge of the degree of reliability of available information?

1.5.4. Is the risk and uncertainty of the without-project condition assumptions addressed?

1.5.5. Are the advantages and costs of reducing risk and uncertainty adequately considered in the planning process?

1.6. Cost Allocation

1.6.1. Is the cost allocation in conformance with existing policies?

1.6.2. Is the necessity for sub-allocation adequately considered?

1.6.3. Are all project purposes included in the allocation?

1.7. Project Cost Sharing

1.7.1. Is the apportionment of cost to the non-Federal sponsor(s) in conformance with present policy and evaluation procedures?

1.7.2. Are there special circumstances associated with the project that warrant considering a change in non-Federal sponsor(s) cost sharing?

1.7.3. Are the items to be furnished by the non-Federal sponsor(s) those normally required under the law and by present policy; and, if not, is adequate support given for classifying the items as those to be furnished by a non-Federal sponsor?

1.7.4. If recreation or fish and wildlife enhancement are included in a multiple-purpose project, is a letter of intent from non-Federal interests included in accordance with Public Law 89-72?

1.7.5. Have reporting officers established that the non-Federal sponsor(s) fully understands and is willing and capable of furnishing the local cooperation specified?

1.7.6. For mitigation projects, is a letter of intent to cost share the mitigation included?

1.8. Coordination:

1.8.1. Is adequate coordination with appropriate State, local, and Federal agencies documented, and are their views considered in formulating the recommended plan?

1.8.2. Does this coordination conform to law, executive orders, and agreements between agencies and, if not, is the departure satisfactorily explained?

1.8.3. Were the proper preservation, conservation, historical, and scientific interests consulted, and were their views given adequate consideration during plan formulation?

1.9. Public Involvement

1.9.1. Is the scoping process in accordance with ER 200-2-2?

1.9.2. Was adequate public involvement conducted during the planning process to fully inform interested parties and to ascertain their views?

1.9.3. Are implications associated with the recommended plan properly addressed?

1.9.4. Are public concerns adequately addressed?

1.9.5. Is the public involvement process documented and discussed?

2. Plan Formulation

2.1. Scoping

2.1.1. Are all reasonable alternatives, including non-structural and no-action alternatives, adequately addressed?

2.1.2. Is recent guidance incorporated into the study?

2.1.3. Is full consideration given to inclusion of recreation as a project purpose?

2.2. Existing Conditions

2.2.1. Is the study area adequately described with appropriate maps?

2.2.2. Is the project location, map, purposes, and outputs described?

2.3. Formulation of Alternatives

2.3.1. Are the assumptions and rationale for the without-project conditions explicitly stated and are they reasonable?

2.3.2. What are the existing water supplies?

2.3.3. Are there institutional arrangements required?

2.3.4. What is the availability of additional water supplies? And what is their probability of development?

2.3.5. What is the water quality of existing and potential water supply?

2.3.6. Are non-structural measures and conservation considered?

2.3.7. Are innovative alternatives fully considered?

2.3.8. For water supply, are a range of measures adequately considered that can, over time, balance water demand for various purposes with water availability?

2.4. Alternative Screening

2.4.1. What are the criteria for alternative screening?

2.4.2. Has an evaluation matrix been developed to aid in screening? Is this matrix fully described?

2.5. Evaluation of Alternatives

2.5.1. Is the with project condition evaluated in a manner similar to the without project condition?

2.6. Plan Selection

2.6.1. Are both beneficial and adverse effects adequately evaluated for the selected plan and alternatives?

2.6.2. Is acquisition of necessary land for future project elements adequately considered?

2.6.3. Is a reasonable justification provided for eliminating alternatives?

2.6.4. Is the national economic development (NED) plan identified and properly evaluated?

2.6.5. Are a sufficient number of alternatives analyzed to define both the lower and upper portion of the net NED benefit curve?

2.6.6. Is there sufficient rationale for any recommended departure from the NED plan?

2.6.7. Is the rationale provided for the selection of major elements of the recommended plan sound and adequate?

2.6.8. Does the selected plan conform to existing policy? If not, are the reasons for departure adequately documented?

2.6.9. Would phased construction be appropriate?

2.6.10. Is the selected plan consistent with applicable comprehensive plans for the area?

2.6.11. Are HTRW concerns addressed?

2.6.12. Is a risk and uncertainty analysis included?

2.7. Report Review

2.7.1. Does the report format follow the most recent guidance?

2.7.2. Are all major technical review issues and resolutions documented?

2.7.3. Are the signature pages for both the certification of independent technical review and certification of legal review included?

3. Economic and Social Analysis Topics

3.1. General

3.1.1. Are NED benefits evaluated in accordance with appropriate guidelines and procedures? If not, are acceptable reasons for deviation from standard procedures furnished?

3.1.2. Are the assumptions regarding future alternative conditions clearly stated and justified, and are these assumptions reasonable?

3.1.3. Are all applicable benefits included in the benefit estimate?

3.1.4. Are the economic projections reasonable?

3.1.5. Are methodologies and assumptions explained in sufficient detail?

3.1.6. Are the information and data adequate to support the benefit estimate?

3.1.7. Is the without-project condition reasonable and does it accurately reflect how non-Federal interests will act if the resource under study is not developed?

3.1.8. Are possibilities of windfall benefits and appropriate special cost sharing considered?

3.1.9. Are average annual benefits on the same time basis as average annual costs?

3.1.10. Are potential negative economic impacts adequately considered and evaluated?

3.1.11. If NED employment benefits are claimed, is the area eligible?

3.1.12. If project implementation impacts adversely affect existing recreation, are user-day losses evaluated?

3.1.13. Is adequate consideration given to tradeoffs between economic and environmental effects?

3.1.14. Do the combined beneficial NED and EQ effects outweigh the combined adverse NED and EQ effects?

3.1.15. Are separable features, including mitigation measures, incrementally justified?

3.1.16. Is the benefit-cost ratio (BCR) for the recommended plan presented, assuming existing conditions prevail over the period of analysis?

3.1.17. Is recreational development or loss imposed by project implementation adequately determined with economic valuation and shown in the chart of accounts?

3.1.18. Do the interest rate and amortization period conform to regulation?

3.1.19. Is a current price level used?

3.1.20. Are induced impacts and associated costs given proper treatment?

3.1.21. Are cost estimates and annual charges determined for mitigation and environmental projects?

3.1.22. Are all the project costs incurred by the local sponsor included?

3.1.23. Is interest during construction correctly calculated and included in the economic analysis?

3.2. Water Supply Studies

3.2.1. Is the without project condition clearly defined and all assumptions fully identified?

3.2.2. Does the without project condition reflect actual water supplies availability?

3.2.3. Are National Economic Development (NED) water supply evaluation methodologies fully described, with all secondary sources documented?

3.2.4. Is future M&I water use projected using a water supply demand model, such as IWR-MAIN

3.2.5. Is baseline demographic data included and are projections of baseline data fully described?

3.2.6. Does the projected water needs seem reasonable?

3.2.7. Are all models and methodologies fully documented? Is the logic defensible and based on sound economic principles?

3.2.8. Are all model inputs fully described and documented?

3.2.9. Is sampling employed to generate any inputs? If so, are sound statistical techniques used?

3.2.10. Are model outputs adequately calibrated to baseline conditions?

3.2.11. Is the deficit between future supplies and use identified and described?

3.2.12. Is the alternative without the Federal plan identified?

3.2.13. Are the alternatives ranked and displayed based on a least cost analysis?

3.2.14. Is the most likely least cost alternative selected?

3.2.15. Are water supply benefits calculated for each reasonable increment of the project?

3.2.16. Is a sensitivity analysis prepared that describes the benefits for significant specific scenarios?

3.2.17. Is the efficiency of non-structural/small-scale measures evaluated?

3.2.18. Is water conservation adequately evaluated and documented?

3.2.19. Are drought contingency plans adequately described?

3.3. Financial Analysis

3.3.1. Is a statement of local sponsor financial capability provided?

3.3.2. Is a local sponsor's financing plan provided?

3.3.3. Is a Commander's assessment of the local sponsor's financing plan prepared?

3.3.4. Does the report include the sponsor's project-related yearly cash flows (both expenditures and receipts where cost recovery is proposed), including provisions for major rehabilitation and operational contingencies and anticipated but uncertain repair costs resulting from damages from natural events?

3.3.5. Does the report indicate the sponsor's ability to finance its share of the project cost and to carry out project implementation, operation, maintenance, and repair/rehabilitation responsibilities?

3.3.6. Does the report state the most appropriate means for raising additional non-Federal financial resources, including those necessary to create special assessment districts (e.g., flood control mission) or to impose fees (e.g., commercial navigation mission) when available resources are not sufficient?

4. Environmental Topics

4.1. General

4.1.1. Are the necessary technical studies and coordination conducted in accordance with National Environmental Policy Act of 1969 (NEPA) and other applicable environmental laws?

4.1.2. Is mitigation of adverse effects considered in each alternative plan?

4.1.3. Is the appropriate level of coordination among Environmental, Engineering, and Real Estate branches evident?

4.1.4. Are secondary project impacts addressed?

4.1.5. Are the environmental impacts of all reasonable alternatives properly evaluated and displayed?

4.2. Draft NEPA and Related Documents

4.2.1. Is a Notice of Intent published in the Federal Register?

4.2.2. Are all plans and alternatives evaluated?

4.2.3. Is a scoping meeting to discuss proposed alternatives and solicit comments on issues scheduled or completed?

4.2.4. Is the environmental setting described for the study area, and at the locations of the proposed alternatives?

4.2.5. Are the significant resources identified for the study area, and at the locations of the proposed alternatives?

4.3. Final NEPA and Related Documents

4.3.1. Are responses to public comments on the draft Environmental Impact Statement prepared?

4.3.2. Are Division's and HQUSACE's review comments incorporated into the final Environmental Impact Statement?

4.3.3. Is the Public Involvement Appendix, which incorporates public and agency comments and Corps responses, prepared?

4.3.4. Is the FEIS filed with EPA and does it accompany the final feasibility report?

4.3.5. Is the FEIS developed and coordinated in accordance with ER 200-2-2?

Reservoir Storage Reallocation Reports

References:
ER 1105-2-100, 22 Apr 2000 (http://www.usace.army.mil/inet/usace-docs/eng-regs/er1105-2-100/toc.htm) – para. 3-8, 3-9; Appendix E, para. E-57
Water Supply Handbook, Revised IWR Report 96-PS-4, Dec 1998 (http://www.iwr.usace.army.mil/iwr/pdf/96ps4.pdf) – Chap. 4

1. Purpose of the Reallocation Report

1.1. Who is requesting the municipal and industrial (M&I) water supply and how is the water usage expected to grow over the projection period?

1.2. What is the amount of water supply storage involved? Relative to storage in reservoir?

1.3. What is the authority for the reallocation? Is the authority discretionary or is Congressional approval required? What is the approval level for the report?

2. Project Background

2.1. What is the project authorization, construction and operation history? What is the authorizing public law, such as the House/Senate documents, etc.?

2.2. Provide information on the project location with a map showing the lake as well.. What are the project purposes and outputs? What is the pertinent data for the project, such as lake levels, storage volumes, flows, etc?

2.3. Were there previous reallocations, and if so, provide information about those? What are the existing water supply repayment agreements?

2.4. If there was an approved cost allocation, provide information about the cost allocation.

3. Economic Analysis (Reallocation Feasibility)

3.1. Water Supply Demand Analysis.

3.1.1. Provide a discussion and evaluation of the demand for water supply. (This will most likely be the User's or requestor's consultants report.)

3.1.2. What is the average daily water demand during drought?

3.1.3. What are the projected water demands for a 30 to 50 year projection period?

3.2. Analysis of Water Supply Alternatives.

3.2.1. Evaluate the alternative sources of water, that is, the users' most likely, least costly alternative to reallocation of storage in the Federal reservoir. This "benefit" (alternative cost) should be higher than the economic and environmental cost associated with the reallocation (establish a price for a similar quality and quantity of water that is being received from the reallocation of the Federal project).

3.2.2. Also mention reallocations considered and more than one alternative, e.g., reallocate flood control, hydropower, sediment, and/or raise the top of the flood control pool.

4. Derivation of User Cost.

4.1. For a reallocation involving hydropower, the Hydropower Analysis Center (HAC) is the Center of Expertise that should develop the hydropower analysis. This analysis includes:

4.1.1. Hydropower Benefits Foregone. (Cost of most likely alternative source of power)

4.1.2. Hydropower Revenues Foregone. (Value of income lost to Power Marketing Agency(PMA))

4.1.3. Hydropower Replacement Costs. (NED cost same as power benefits foregone)

4.1.4. Credit to Power Marketing Agency (PMA)

4.2. The User Cost may also include:

4.2.1. Flood Control Benefits Foregone (loss to entire system). Also, lost recreation and other costs, e.g. easements, relocations, cultural and environmental mitigation.

4.2.2. Updated Cost of Storage.(update cost of storage to present day price levels and then assign percent of costs base on “use of facilities” procedure.) See Water Supply Handbook.

4.3. The Users Cost is the higher of the preceding items.

5. Test of Financial Feasibility.

5.1. To test the financially feasibility of the selected alternative, compare the cost of Federally reallocated storage to the most likely alternative.

5.2. Make sure the appropriate interest rate and repayment period are shown.

5.3. Account for all costs the User would incur to obtain comparable quantity and quality of water to the same location.

6. Cost Account Adjustments.

6.1. Show the Credit to the PMA based on estimated power loss and current rates charged by the PMA.

7. Environmental Considerations.

7.1. Discuss the environmental effects of each alternative (NEPA documentation in appendix)

8. Conclusions.

8.1. Present the Findings and intent of Sponsor to pursue reallocation.

9. Recommendations.

9.1. Present a recommendation for reallocation of storage.

10. Appendices should include:

10.1. NEPA Documents. EA with a FONSI. Or a EIS.

10.2. Letters and views of other Federal and non-Federal interests.

10.3. Reports prepared by others.

Water Supply Contracting

References:
Model Format for Water Supply Storage Agreements: Appendix B: Model Formats, Water Supply Handbook, IWR Report 96-PS-4 (Revised), dated December 1998 Revised 2003. Model format is an approved format. Modifications would require prior approval from higher authority.

The water supply storage agreement, or contract, is a legal document that describes the responsibilities, requirements and rights of the Government and the User. Specific language requirements are shown in the agreement and organized by major topic or Article.

Article 1 – Water Storage Space. This section describes details about the storage space contracted for.

1.1 Project Construction information

1.2 Rights of User—Includes percent and acre-feet of storage

1.3 Government rights reserved—Right of way and easements are separate

1.4 Quality or Availability of Water—Raw water only

1.5 Sedimentation surveys—At intervals not to exceed 15 years unless agreed to; equitable redistribution of storage if necessary after survey.

Article 2 – Regulation of and Right to Use of Water. This section describes User responsibilities.

2.1 Sole responsibility of User to acquire water rights

Article 3 –Operation and Maintenance responsibilities

3.1 Government shall operate and maintain and User pays share of costs

3.2 User responsible for O&M for diversion facilities.

Article 4 – Measurement of Withdrawals and Releases Requirements for User

4.1 User responsibility to install and maintain meters if not thru project outlet works

4.2 Monthly reporting requirements

Article 5---Payments to the Government. Users' required payments to the Government.

5.1 Project Investment Costs repayment based on two options:

5.1.1 **Option 1:** For Projects where M&I storage was operational or under construction as of 17 Nov 1986. User repays:

5.1.2.1 100 percent of the construction costs of specific water supply facilities as shown in Exhibit B

5.1.2.2 Allocated percent of total Project joint-use construction costs

5.1.2.3 Interest during construction

5.1.2 **Option 2:** Project Investment Costs where M&I storage added through reallocation of storage. User repays:

5.1.2.1 Entire actual amount of costs that are based on revenues foregone, benefits foregone, replacement costs, updated cost of storage, or other costs as appropriate.

Repayment is made within the life of the project, not to exceed 30 years.

5.2 Repair, Rehabilitation, and Repair Costs: User to repay

5.3 Annual Operation and Maintenance Expenses: User to repay:

5.3.1 Present Use Storage, user repays specific water supply facilities.

5.3.2 Future Use Storage

Payment due and payable in advance and based on Government expense during fiscal year most recently ended

5.4 Prepayment, optional right of User

5.5 Delinquent Payment share with interest.

5.6 Credit to User for payments to Government for future use storage agreement.

Article 6 – Adjustment to Project Investment Cost (not needed in reallocations)

Article 7 – Duration of Agreement: Effective when approved by Secretary of the Army for life of Project

Article 8 – Permanent Rights to Storage: Granted upon completion of payments

8.1 Continue payments of annual O&M

8.2 Water supply costs share related to reconstruction, rehab, replacement of project features.

8.3 Adjustments based on sedimentation

8.4 As long as Government continues to operate project

The following Articles are generally standard for an agreement and are in the Model Agreement:

Article 9 – Release of Claims (see project documents)

Article 10 – Transfers and Assignments

Article 11 – Officials Not to Benefit

Article 12 – Covenant Against Contingent Fees

Article 13 – Protective Covenant (delete if not applicable)

Article 14 – Environmental Quality: Statement requiring control of environmental pollution.

Article 15 – Federal and State Laws: Compliance statement with Federal and State Laws.

Article 16 – Definitions (pertinent ones only) used in the Agreement

Article 17 – Approval of Agreement: Secretary of the Army or authorized representative is required to sign.

EXHIBIT A – CERTIFICATION by legal counsel

EXHIBIT B – COST COMPUTATIONS to include tables showing:

- Lake Storage(usable or storage remaining after 100 years of sedimentation from the date the project is operational) data by feature, flood control, conservation, other
- Allocation of Estimated Construction Cost by feature and percent of project joint-use construction cost.
- Investment costs to be repaid by user for water supply storage to include present use and future use.
- Total annual cost to user for present use of water supply storage to include interest and amortization, operation and maintenance, repair, rehabilitation and replacement (joint use and specific water supply facilities)

EXHIBIT C – AMORTIZATION SCHEDULE for present demand, 30 years

- Applies to projects or under construction as of 17 November 1986 which will be repaid over time in lieu of during construction.
- All reallocations.
- Interest rate to be adjusted at 5 year intervals.

Supporting Information

References

ER 1105-2-100, Planning Guidance Notebook, 22 April 2000, Appendix E, Section VIII
http://www.usace.army.mil/inet/usace-docs/eng-regs/er1105-2-100/a-e.pdf

EP 1165-2-1, Digest of Water Resources Policies and Authorities, 30 July 1999
http://www.usace.army.mil/publications/eng-pamphlets/ep1165-2-1/entire.pdf

Water Supply Handbook, Revised IWR Report 96-PS-4, December 1998
http://www.iwr.usace.army.mil/iwr/pdf/96ps4.pdf

Water Supply Value to the Nation Brochure, undated
http://www.iwr.usace.army.mil/iwr/pdf/watersupplyb.pdf

Water Supply Seminar, IWR Report 03-R-1, September 2003
http://www.iwr.usace.army.mil/iwr/pdf/wsseminar_report.pdf

Water Management and Reallocation Center of Expertise website (under construction)
http://www.swd.usace.army.mil/WMRSCX.htm

Legislation, Policy, and Guidance

A. Corps of Engineers Water Supply Missions

Over the years there has been a declining Federal interest in the long range management of water supplies in the United States. Although States and local sponsors have the primary responsibilities in the development and management of their water supplies, the Corps of Engineers does participate and cooperate under the condition that water supplies are included in Federal navigation, flood control, and other multipurpose projects. Most of the financial burden for water supply has been given through legislation to the water supply users. The Corps of Engineers water supply mission and policies has evolved from legislation enacted since 1938.

B. Legislation and Corps Policy.

1. **General.** The information summarized below was obtained from the "Water Supply Handbook, A Handbook on Water Supply Planning and Resource Management," IWR Report 96-PS-4 (Revised), December 1998. Chapter 2 and Appendix A of this document provides detailed information about legislation and the evolution of Corps policy over time. These laws are important to Corps water supply planning in that they provide the authority for the Corps to use their reservoirs for municipal and industrial, surplus, and agricultural water supply. Also, they give the Corps the authority to provide emergency water and assist states and local interest in their water supply planning process. A summary of pertinent legislation is discussed below in two categories by date of legislation.

2. **War Department Civil Appropriations Act of 1938**

- Authorizes domestic water supply at Corps Reservoirs
- Non-Federal beneficiaries pay costs of increased storage capacity
- Cost allocation difficult to determine
- Beneficiaries advance funds prior to construction

3. **Flood Control Act of 1944 (PL 78-534)**

- Secretary of Army can contract with cities, states, private companies, or individuals for sale of surplus water for domestic, industrial, and agricultural use (amended in 1986 for irrigation) from USACE projects.

4. **Water Supply Act of 1958 (Title III of PL 85-500)**

- Authorized the Corps to include M&I water supply for present and future demand at Corps reservoirs.
- M&I water supply cost plus interest to be paid by non-Federal interests within the life of the project (50 years)
- 30 percent of project costs and storage could be allocated for future water supply
- 10 percent interest free period for future supplies

- Any project modification that seriously affects project authorized purposes and involves major structural or operational changes must be approved by Congress.

5. **Water Resources Development Act (WRDA) of 1986 (Public Law 99-662)**
    - Elimination of 10-year interest free period
    - Reduction of the payback period from 50 years to 30 years
    - Annual reimbursement of the operation and maintenance costs (already established policy)
    - Non-Federal share of M&I water supply was assigned 100 percent of the costs. And agriculture share is 35 percent
    - Interest rate formula modified so that .125 percent was added for transactions costs, and interest rate recomputed every five years.

6. **WRDA 1990 (P.L 101-640)**
    - Reduces price of water supply for low income communities.

C. Water Supply Storage Policies.

Storage conveys the right to store water in a Corps reservoir project without guaranteeing that the resource will be available. The right to withdraw water usually requires a separate agreement. The acquisition of water rights is a responsibility of the water user, not the Corps.

1. **Authorities**
    - Water Supply Act of 1958 (P.L. 85-500), as amended, 43 USC 390b
    - P.L. 88-140 (1963), 43 USC 390c et seq., Permanent Rights to Storage
    - Section 103(c)(2) and (3), WRDA 1986, (P.L. 99-662), 33 USC 2213(c)(2) and (3), Cost Sharing
    - Section 931 WRDA 1986 (P.L. 99-662), Interim Use of Water Supply for Irrigation (see 43 USC 390)
    - Section 932, WRDA 1986 (P.L. 99-662), Amendments to Water Supply Act of 1958

2. **Provisions**
    - Water supply storage capacity or space may be included in any Corps reservoir to impound water for present and future municipal or industrial use. Not more than 30% of the total allocated costs may be for future water needs.
    - Modification of an existing reservoir, by structural changes or reallocation of existing storage, to add or increase dedicated storage capacity or space for water supply, requires separate Congressional authorization if it would significantly impact existing authorized purposes or involve major structural or operational changes.

- By Army policy, the Chief's discretionary authority for reallocation of existing storage is limited to the lesser of 15% of total usable storage or 50,000 acre-feet provided it does not have significant impacts on other project purposes.
- P.L. 88-140 grants permanent rights to use the storage space to the non-Federal sponsor upon completion of the payments of the costs of storage.
- Non-Federal sponsors are responsible for acquiring the water rights necessary for the use of stored water. Water Rights are within the purview of the State to provide, not the Federal Government.

3. Cost-Sharing

- Non-Federal sponsors must agree to reimburse the Government for 100% of capital costs of the reservoir allocated to water supply over the life of project but not more than 30 years from initial use of the project for water supply.
- Current Administration policy requires that non-Federal sponsors pay all costs of new construction during the period of construction.
- Non-Federal sponsors also must agree to reimburse the Government for 100% of allocated costs of operation and maintenance on an annual basis, and allocated costs of repairs, reconstruction, major rehabilitation and replacement when required.
- For new projects, non-Federal costs are based on the actual development costs allocated to water supply storage.
- For reallocations of storage from other purposed, non-Federal costs are based on the current value of that storage (the highest of benefits/revenues forgone, replacement cost, or updated cost of storage).

D. Surplus Water.

An agreement for "surplus water" conveys the right to water out of a Corps project that the sponsor has acquired the rights to by another means. Water stored for purposes no longer necessary can be considered surplus. However, a permanent storage reallocation is performed when long term water use is desired.

1. Authority

- Section 6, 1944 FCA (P.L. 78-534), 33 USC 708

2. Provisions

- ASA(CW) may make agreements with states, municipalities, private concerns and individuals, at prices and terms ASA(CW) finds reasonable, to provide surplus water or temporary use of available storage space from Corps reservoirs for domestic and industrial uses, rather than reallocating and granting a permanent right to that storage space.
- The storage space must have been provided in the reservoir for some other purpose not yet utilized, or the water would have to be more beneficially used as

municipal and industrial water than for other authorized purposes. The use must not significantly affect the authorized purposes.

- Such agreements are normally limited to 5 years, with provisions for additional 5-year extensions.

3. Cost Sharing

- During the period of use, user pays an annual amount based on the updated capital cost of the reservoir allocated to water supply and prorated for the period of use, plus OMRR&R costs.

E. Minor Emergency Withdrawals.

The State or political subdivision should enter into an agreement with the Secretary of the Army and to agree to act as a wholesaler for all of the water requirements of individual users.

1. Authority

- Section 6, 1944 FCA (P.L. 78-534), 33 USC 708

2. Provisions

- When the governor of a state has declared an emergency due to a drought, temporary withdrawals of water from Corps reservoirs may be permitted to supplement normal supplies of water for domestic and industrial uses.
- Up to 99 acre-feet of storage may be reallocated by the District Engineer.

3. Cost Sharing

- The cost assigned to the water is based on the current value of the storage.

Policy Issues

Water Supply:

1. Detail required in the evaluation of alternative sources. How much detail, such as costs, yields, environmental, etc., is required in the evaluation of alternative sources of water supply?
2. Methodology for updating costs and benefits. Engineering News Record (ENR) construction costs and/or Civil Works Construction Cost Index System (CWCCIS) are two sources of index values to update engineering costs related to a project.
3. Use of appropriate interest rate in the evaluation. Economics Guidance Memorandum (EGM) fiscal year interest rate data is furnished to provide guidance.
4. Identification of the value of conservation and other non-structural measures.
5. Disaggregation of water use by sectors. Difficulty sometimes exists in disaggregating water use data by sectors, such as residential, commercial, industrial water users.

Reallocation Reports:

1. Use of appropriate interest rate in the evaluation. Economics Guidance Memorandum (EGM) fiscal year interest rate data is furnished to provide guidance.
2. Methodology for updating costs and benefits. Engineering News Record (ENR) construction costs and/or Civil Works Construction Cost Index System (CWCCIS) are two sources of index values to update engineering costs related to a project.
3. Use of non-standard pricing for reallocated storage, policy requires coordination with the vertical team.

Water Supply Contracting:

1. Significant exceptions to model contract agreement language requires coordination with the vertical team, especially Counsel at all required levels.
2. Revisions to Exhibits to simplify and provide more explanation for the User.
3. Interest rate to use in the contract. EGMs provide guidance.

Review Process

Water Supply Storage Agreement Approval Authority

Draft Agreement

Quantity Acre-feet	Storage Agreement		Reallocation Reports
	Without Reallocation	With Reallocation	
0 to 99	District	District	District
100 to 499	Division	Division	Division
500 to 999	Division	ASA(CW)	HQUSACE
1000 and Up	ASA(CW)	ASA(CW)	HQUSACE

- A copy of all approved agreements will be provided to ASA(CW)
- Acre-feet of storage must produce the water under agreement on a dependable basis
- The first storage agreement on any project will be approved by ASA(CW)
- Reallocations which do not require Congressional approval where no significant effects on other authorized project purposes and/or no major structural or operational changes.
- When the cumulative amount of storage reallocated exceeds the lesser of 4000 ac-ft or 10% of available storage, reports will be submitted to ASA(CW) prior to approval
- Reallocation reports, where quantity is 500 acre-feet and up, submitted to ASA(CW) with the draft agreement prior to approval

Final Agreement

Quantity Acre-feet	Storage Agreement	
	Without Reallocation	With Reallocation
0 to 499	District	District
500 to 999	Division	HQUSACE
1000 and Up	HQUSACE	HQUSACE

- When using the approved draft agreement and local signature within six months of draft approval
- Beyond six months, final agreement resubmitted for approval to the office with approval authority for the draft.
- If final agreement involves changes other than editorial, agreement must be resubmitted to ASA (CW) for approval.
- ASA(CW) reserves the right to retain approval authority of any final agreement

Surplus Water Agreement Approval Authority

Draft Agreement

Quantity Acre-feet	Agreement	Letter Reports
0 to 99	District	District
100 to 499	Division	Division
500 to 999	Division	HQUSACE
1000 and Up	ASA(CW)	HQUSACE

- A copy of all approved agreements will be provided to ASA(CW)
- Acre-feet of storage must produce the water under agreement on a dependable basis
- The agreement must not affect authorized purposes (water is not being used for an authorized purpose). When surplus water agreement involves water being used for an authorized purpose, the agreement will be treated like a reallocation agreement and report.
- With HQUSACE approval, letter report will be submitted to ASA(CW) with the draft agreement prior to approval.
- When the cumulative amount of storage reallocated exceeds the lesser of 4000 ac-ft or 10% of available storage, reports will be submitted to ASA(CW) prior to approval
- Reallocation reports, where quantity is 500 acre-feet and up, submitted to ASA(CW) with the draft agreement prior to approval

Final Agreement

Quantity Acre-feet	Agreement
0 to 499	District
500 to 999	District
1000 and Up	HQUSACE

- When using the approved draft agreement and local signature within six months of draft approval
- Beyond six months, final agreement resubmitted for approval to the office with approval authority for the draft.
- If final agreement involves changes other than editorial, agreement must be resubmitted to ASA(CW) for approval.
- ASA(CW) reserves the right to retain approval authority of any final agreement

Review Process

Check List: Draft Water Supply Reallocation Report Submission to HQ

After completing the technical, policy and legal review of the draft report and making any resulting changes, **the District will submit 6 copies to the Headquarters MSC Regional Integration Team (CEMP-SWD) and two copies to the MSC (CESWD-PDS-P).** Also submit electronic (MS Word) files of package.

_____**Transmittal memo** (state review is requested for the draft report, PWI#, name and phone number of District point of contact (POC))

_____**Water Supply Fact Sheet,** one page summary of project information, reallocation information, and any special considerations for the project.

_____**Draft Reallocation report** including draft NEPA and other environmental documentation. May be part of Reallocation Report or separate document. Needs to include all public review comments and responses to comment information.

_____**Model Water Supply Storage Agreement** including Red-Line/Strike-Out changes. Included is Table B-1 Annual Repayment Schedule, Exhibit C Assurance of Compliance with the Department of Defense Directive under Title VI of the Civil Rights Act of 1964, and Exhibit D Certification Regarding Lobbying.

_____**Model Water Supply Storage Agreement** deviations list and rationale or justification for deviation.

_____**Draft or Final Water Supply Storage Agreement** that is requested for approval (clean copy).

_____**Final Cost Allocation Summary,** if one was completed.

_____**Certification of Legal Review**

_____**Certification of Completion of ITR**

_____**Certification of ITR Review**

_____**ITR comments** and details of how they were addressed

_____**Latest project guidance memorandum (PGM)**, if completed, (one copy only to HQ and one copy to SWD)

_____**Compliance memorandum for the latest PGM.** District will prepare this using own office symbol, date, and signature of district POC with phone number. Include all comments, responses, discussions, required actions, etc., paragraph from PGM. Add "Action" paragraphs stating where and how the issues in each comment or the required action specified following each comment have been addressed in the draft report or elsewhere as needed. (Upon request

HQ will provide electronic copy of PGM for district to use as basis for compliance memorandum.)

_____ **Date Checklist Completed**

_____

Signature of Checklist Preparer

_____

Signature of Authenticator